

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-22 (cancelled).

23 (previously presented). A polymer blend comprising:

(a) 1 - 99% by weight of a copolymer of ethylene and an alpha olefin having from 3 to 10 carbon atoms, said copolymer having

(i) a density in the range 0.905 to 0.940 g cm^{-3} ,

(ii) a melt elastic modulus G' ($G'' = 500 \text{ Pa}$) in the range 10 to 150 Pa,

and

(iii) a melt index ($190^{\circ}\text{C}/2.16 \text{ kg}$) in the range 5 to 50 g/10 ml, and

(b) from 1 - 99% by weight of a low density polyethylene (LDPE) comprising a homopolymer of ethylene having a density from 0.914 to 0.928 g cm^{-3} ,

wherein the sum of (a) and (b) is 100 %.

24 (previously presented). A polymer blend according to claim 23 wherein the copolymer of component (a) has a density in the range 0.907 to 0.915 g cm^{-3} .

25 (previously presented). A polymer blend according to claim 23 wherein the copolymer of component (a) has a melt index in the range 12 to 50 g/10 ml.

26 (previously presented). A polymer blend according to claim 23 wherein the copolymer of component (a) has a melt elastic modulus G' in the range 11 to 90 Pa.

27 (previously presented). A polymer blend according to claim 23 wherein the copolymer of component (a) has a flow activation energy (E_a) in the range 28 to 50 kJ/mol.

28 (previously presented). A polymer blend according to claim 23 wherein the copolymer of component (a) has a M_w/M_n in the range 2 to 3.5.

29 (previously presented). A polymer blend according to claim 23 wherein the copolymer of component (a) exhibits more than one differential scanning calorimetry (DSC) melting peaks between 30° and 150°C.

30 (previously presented). A polymer blend according to claim 23 wherein the LDPE of component (b) has a melt index in the range 0.1 to 25 g/10 ml.

31 (previously presented). A polymer blend according to claim 23 wherein the LDPE of component (b) has a melt elastic modulus G' in the range 80 to 200 Pa.

32 (previously presented). A polymer blend according to claim 23 wherein the ratio of component (a) to component (b) is in the range 60:75 to 40:25 by weight.

33 (previously presented). A polymer blend according to claim 23 wherein the blend has a melt elastic modulus G' in the range 30 to 200 Pa.

34 (previously presented). A polymer blend according to claim 33 wherein the blend has a melt elastic modulus G' in the range 30 to 200 Pa.

35 (previously presented). A polymer blend according to claim 34 wherein the blend has a melt elastic modulus G' in the range 60 to 120 Pa.

36 (previously presented). A polymer blend according to claim 35 wherein the melt elastic modulus G' is in the range 75-100 Pa.

37 (previously presented). A polymer blend comprising:

(a) 1 - 99% by weight of a copolymer of ethylene and an alpha olefin having from 3 to 10 carbon atoms, said copolymer having

(iv) a density in the range 0.905 to 0.940 g cm⁻³,

(v) a melt elastic modulus G' ($G''= 500$ Pa) in the range 10 to 150 Pa,

and

(vi) a melt index (190°C/2.16 kg) in the range 5 to 50 g/10 ml, and

(b) from 1 - 99% by weight of a low density polyethylene (LDPE) comprising a homopolymer of ethylene having a density from 0.914 to 0.928 g cm⁻³, and

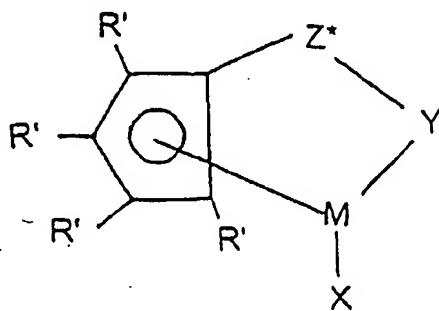
(c) from 0 - 98% by weight of a copolymer of ethylene and an alpha-olefin having 3 to 10 carbon atoms or a low density polyethylene (LDPE),

wherein the sum of (a), (b) and (c) is 100 %.

38 (previously presented). A polymer blend according to claim 23 wherein the copolymer of component (a) is prepared by use of a catalyst system comprising a transition metal compound.

39 (previously presented). A polymer blend according to claim 38 wherein the transition metal compound is a metallocene.

40 (currently amended). A polymer blend according to claim 39 wherein the metallocene has the general formula:



wherein:-

R' each occurrence is independently selected from hydrogen, hydrocarbyl, silyl, germyl, halo, cyano, and combinations thereof, said R' having up to 20 non-hydrogen atoms, and optionally, two R' groups, where R' is not hydrogen, halo or cyano, together form a divalent derivative thereof connected to adjacent positions of the cyclopentadienyl ring to form a fused ring structure;

X is a neutral η^4 bonded diene group having up to 30 non-hydrogen atoms, which forms a π -complex with M;

Y is -O-, -S-, -NR*-, -PR*-;

M is titanium or zirconium in the + 2 formal oxidation state;

Z* is SiR^*_2 , CR^*_2 , $\text{SiR}^*_2\text{SiR}^*_2$, $\text{SiR}^*_2\text{SiR}^*_2$, $\text{CR}^*_2\text{CR}^*_2$, $\text{CR}^*=\text{CR}^*$, $\text{CR}^*_2\text{SiR}^*_2$

$\text{CR}^*_2\text{SiR}^*_2$, or

GeR^*_2 , wherein:

R* each occurrence is independently hydrogen, or a member selected from hydrocarbyl, silyl, halogenated alkyl, halogenated aryl, and combinations thereof, said

R* having up to 10 non-hydrogen atoms, and optionally, two R* groups from Z*, when R* is not hydrogen, or an R* group from Z* and an R* group from Y form a ring system.

41 (previously presented). A polymer blend according to claim 38 wherein the copolymer is prepared in the gas phase.

42 (previously presented). A polymer blend according to claim 23 wherein the low density polyethylene (LDPE) of component (b) is prepared by a high pressure process.

43 (previously presented). An extrusion coating comprising a polymer blend comprising:

(a) 1 - 99% by weight of a copolymer of ethylene and an alpha olefin having from

3 to 10 carbon atoms, said copolymer having

- (i) a density in the range 0.905 to 0.940 g cm^{-3} ,
- (ii) a melt elastic modulus G' ($G'' = 500 \text{ Pa}$) in the range 10 to 150 Pa , and
- (iii) a melt index ($190^{\circ}\text{C}/2.16 \text{ kg}$) in the range 5 to $50 \text{ g}/10 \text{ ml}$, and

(b) from $1 - 99\%$ by weight of a low density polyethylene (LDPE) comprising a homopolymer of ethylene having a density from 0.914 to 0.928 g cm^{-3} ,
wherein the sum of (a) and (b) is 100% .

44 (previously presented). An extrusion coating comprising a polymer blend comprising:

(a) $1-99\%$ by weight of a copolymer of ethylene and an alpha olefin having from 3 to 10 carbon atoms, said copolymer having

- (i) a density in the range 0.905 to 0.940 g cm^{-3} ,
- (ii) a melt elastic modulus G' ($G'' = 500 \text{ Pa}$) in the range 10 to 150 Pa ,

and

- (iii) a melt index ($190^{\circ}\text{C}/2.16 \text{ kg}$) in the range 5 to $50 \text{ g}/10 \text{ ml}$,

(b) from $1-99\%$ by weight of a low density polyethylene (LDPE) comprising a homopolymer of ethylene having a density from 0.914 to 0.928 g cm^{-3} , and

(c) from 0.98% by weight of a copolymer of ethylene and an alpha olefin having 3 to 10 carbon atoms or a low density polyethylene (LDPE) polymer wherein the sum of (a), (b) and (c) is 100% .